

**Amendments to the Claims:**

The listing of claims will replace on all prior versions, and listings, of claims in the application:

1. (previously presented) An ink delivery device for direct-write nanolithographic printing of inks with use of a tip or tip array comprising:

ink reservoirs,  
microfluidic channels connected to the ink reservoirs;  
dipping wells connected to the microfluidic channels,  
wherein the dipping wells have a geometry for dipping the tip or tip array into the dipping wells.

2. (previously presented) The ink delivery device according to claim 1, wherein the dipping wells have a geometry such that evaporation of the ink is minimized.

3. (previously presented) The ink delivery device according to claim 1, wherein the microfluidic channels have a geometry such that evaporation of the ink is minimized.

4. (previously presented) The ink delivery device according to claim 1, wherein the ink reservoirs have a geometry such that evaporation of the ink is minimized.

5. (previously presented) The ink delivery device according to claim 1, wherein the dipping wells, the microfluidic channels, and the ink reservoirs have a geometry such that evaporation of the ink is minimized.

6. (previously presented) The ink delivery device according to claim 1, wherein the surface chemistry of the wells and channels, or their surrounding areas, is modified to guide ink to precise locations.

7. (previously presented) The ink delivery device according to claim 5, wherein the surface chemistry is modified with a hydrophilic modification or a hydrophobic modification.

8. (previously presented) The ink delivery device according to claim 1, wherein the device further includes integrated microelectronics.

9. (previously presented) The ink delivery device according to claim 1, wherein the device further includes alignment marks.

10. (previously presented) The ink delivery device according to claim 1, wherein the device further includes posts.

11. (previously presented) The ink delivery device according to claim 1, wherein the microfluidic channels are open channels.

12. (previously presented) The ink delivery device according to claim 1, wherein the microfluidic channels are closed channels.

13. (previously presented) The ink delivery device according to claim 1, wherein the wells are micromachined wells.

14. (previously presented) The ink delivery device according to claim 1, wherein the microfluidic channels become more narrow with the flow of ink to the wells.

15. (previously presented) The ink delivery device according to claim 1, wherein reservoir, channels, and wells are disposed on a silicon wafer.

16. (previously presented) The ink delivery device according to claim 1, wherein the wells or channels are filled with a filler.

17. (previously presented) The ink delivery device according to claim 1, wherein the wells or channels are filled with a filler capable of retaining ink with minimum evaporation.

18. (previously presented) The ink delivery device according to claim 1, further comprising micromechanical pumps and microvalves.

Claims 19-28 (cancelled).

29. (previously presented) A delivery device for direct-write nanolithographic printing using a tip array comprising:  
reservoirs,  
microfluidic channels connected to the reservoirs;  
an array of dipping wells connected to the microfluidic channels,  
wherein the array of dipping wells has a geometry which matches the arrangement of the tip array.

Claims 30-70 (cancelled).

71. (previously presented) A microfluidic device comprising:  
a substrate comprising a surface and a plurality of microchannels which are hydrophilicly surface treated, and  
at least one hydrophobic barrier layer on the surface between the microchannels which prevents cross contamination between the plurality of microchannels when liquid flows through the microchannels.

Claims 72-96 (cancelled).